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ABSTRACT

Evaluation methods lack direction to improve efforts of teachers because the methods operate on vague impressions. Congruence analysis techniques offer promise for diagnostic determination of strengths and weaknesses in teaching practices over a variety of specified criteria. The analysis circumvents some of the problems of linking objective data to supervisory interventions. As demonstrated by the writer, congruence analysis is based on: (1) multiple data sources to add credibility to findings, (2) collaborative involvement of the teacher in all aspects of the process, (3) congruence analysis procedures following logical rules, and (4) diagnoses that relate to specific alternative courses of action for improving practices. A diagnostic methodology includes events described in detail, data analyzed as related to specific criteria identified, and action alternatives specified. Three data sources include the teacher as a self-reporting "introspector," a supervisor as a systematic "observer-recorder," and a set of students as knowledgeable "interactors." "Congruence analysis illustrations" are presented which diagnose congruent data from two or more sources as either "need for improvement" or "accomplishment." Sample instrumentation for congruence analysis is appended. (CJH)

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Digest of Presentation

DEVELOPMENTAL EVALUATION CONGRUENCE ANALYSIS TECHNIQUES FOR DIAGNOSING CLASSROOM TEACHING

by

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A Presentation to the National Commission on Instructional Supervision Institute on Issues, February 27-28, 1986, San Francisco, California

The current furor over testing in pursuit of excellence in public education is a largely misguided effort to find easy answers with simple angles to very complex questions of educational evaluation. Professional educators are hardly strangers to the scene. Since the time of Socrates, at least, practitioners and scholars alike have struggled to achieve more through formal teaching. Over the years, the focus for improving education has shifted back and forth from curriculum development, to learning, to teaching, to achievement, and to organization with no particular logic or rationale, with emphasis and relationships given little attention.

In the last 30 years, much attention has been given to research and development in virtually every aspect of formal schooling. Much has been learned; much remains beyond our ability to understand.

No aspect of the educational enterprise known as "schooling" has been better served by researchers and scholars than that focusing upon teaching--teaching effectiveness. (Many landmark studies - Ryans, Flanders, Gage, Withall, Good, etc.) Supervisors, administrators and teachers have all responded with

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surprising speed to knowledge (or really newly verified knowledge about effective teaching. Hence, teacher evaluation, teacher training, and instructional supervisory practices have all been changing with surprising speed.

Changing practices are stimulating to most of us, but are not wisely accepted as "good" without critical field testing and professional review. In supervisors' efforts to use the best wisdom about teaching to improve its practice and hence, learning, we have seen various systems and programs emerge. Micro-teaching, sensitivity training, clinical supervision, action research, management by objectives, modeling, and coaching have been just a few of many systematic efforts to promote improved teaching. Equipped with new knowledge about teaching and sound concepts about adult growth and development, nearly all of these efforts have been demonstrably effective to some significant degree. (Limitations) They have replaced to a large extent (until just the last few years) the discredited systems of inspection, judgmental ratings, and pressured resignations. (Testing and merit systems as "throw-backs")

Despite considerable progress in the technology of supervisory practice as it has used research and focused on improving teaching practices, all has not been achieved. Curriculum development has suffered conceptual and methodological stagnation since the early 1960's. Testing has become increasingly diversionary, serving bureaucrats and politicians but not guiding teaching and learning. Inservice training of teachers is still in chaotic form in most schools, and administrative theory continues to explore simplistic notions about leadership, ignoring technical skill requirements. These are large and important concerns to hopefully be addressed elsewhere.

In the remainder of this presentation I'd like to stress and illustrate several technical aspects of evaluation of teaching for improving the teaching/learning process. Given a substantial array of recognized "good teaching practices" and reasonably reliable methods of describing actual practice, dramatic improvements can be produced. The programs or systems mentioned previously are still viable components of supervisory efforts in behalf of excellence in teaching. However, all of them lack powerful, diagnostic components. They tend to operate, in fact, on suppositions or vague impressions. Evaluation data are generally lacking or unutilized in stimulating and directing the improvement efforts of teachers.

Congruence analysis techniques seem to offer unusual promise for diagnostic determination of both strengths and weakness in teaching practices over a broad array of specified criteria. The analytical scheme circumvents, to a degree, some of the perplexing problems of linking objective data to supervisory interventions.

Congruence analysis to be demonstrated here is based on the following:

(1) Multiple data sources to add credibility to findings.

(2) Collaborative involvement of the teacher in all aspects of the process.

(3) Congruence analysis procedures following logical rules.

(4) Diagnoses that relate to specific alternative courses of action for improving practices.

A diagnostic methodology that has now been field tested with some promising results utilizes two or more sets of descriptive data using common criteria of performance. This technique derives from a set of assumptions that fully valid and reliable data about complex teaching performance is not often available from any single source or measure. Hence, several sets of information, from different sources, while less than fully adequate,can produce diagnostic results.

The essential features of diagnostic analysis in contrast to other analytical or evaluation techniques include events described in great detail, data analyzed as related to specific criteria, strengths and weaknesses identified, and action alternatives specified; all within a highly collaborative framework or process.

Three data sources that are generally useful and readily available include the teacher as a self-reporting introspector, a supervisor as a systematic observer-recorder, and a set of students as knowledgeable interactors . All have information bases on which to draw. Each has a unique perspective.

Congruence analysis illustrations in some simple forms are shown in Exhibit 8.11 and 8.12 from Harris'(1986)* work on developmental teacher evaluation. When data from two or more sources are congruent either 'Need for improvement" or "Accomplishment" is diagnosed. When data are incongruent "uncertainty" is acknowledged.

More precise diagnoses are possible when three sources of data produce patterns of congruence that can be interpreted as needs to improve, upgrade, or refine practices as illustrated in Exhibit 8.10.

Instrumentation for congruence analysis can take various forms as illustrated in Exhibits 8.10,8.11, and 8.12. However, the active collaboration of the teacher is better served when data are relatively simple and reflect "face validity". Illustrations of such instruments are shown as DeTEK Instruments II,III, and IV. These come from the Developmental Teacher Evaluation Kit (1982) **. A worksheet for use with a collaborating teacher is shown as DeTEK Instrument V. It is on the basis of such diagnoses that detailed, individual growth plans are developed and implemented.

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* Ben M. Harris, Developmental Teacher Evaluation. Boston: Allyn and Bacon, Inc. 1986.

** DeTEK by Ben M. Harris and Jane Hill. Austin: Southwest Educational Development Laboratory, 1982.

EXHIBIT 8.11 Diagnostic profile illustrating diagnostic analysis by forced-choice data

Focus X: Behavior: Id-Paces student activities . . . . *

Explicated Criteria of Performance (Selected)	Frequency of Choices: Self	Supervisor or other	Diagnoses	Priority
(1) Moves about the room surveying individual student activities.	1	0	Need	#1
(2) Reminds the entire group of students about time allocations.	5	4	—	
(2a) Reminds individuals of time allocations when needed.	2	5	Uncertainty	
(3) Adjusts time allocations to fit needs of individuals.	0	2	Need	#2
(4) Provides small group work to assist students with their assignments.	5	4	—	
(4a) Provides direct assistance to individuals in helping complete assignments.	2	0	Need	#3
Total tallies =	(15)	(15)		

* Source: Ben M. Harris, Developmental Teacher Evaluation Allyn and Bacon, 1986.

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EXHIBIT 8.12 Congruence analysis illustration using Q-sort data from 3-sources *

Explicated Criteria Statements	Weighted Values* Self-Analysis	Principal Analysis	Other Supervisor	Sum of Weights	Diagnosis
#6. Teaches things step by step	(++)	(+)	(0)	+3	Refine
#13. Gives specific details	(+)	(−)	(+)	+1	Uncertain
#1. Explains things simply	(+)	(++)	(++)	+5	Accomplishment
#17. Explains, then stops so students can think about it.	(−)	(−)	(−−)	−4	Need
#21. Shows examples of how to do the work.	(−−)	(−)	(−−)	−5	Need
#24. Asks questions to find out if students really understand.	(−)	(−)	(0)	−2	Uncertain
#4. Stays with topic until students understand.	(−)	(0)	(0)	−1	Uncertain

*Assign values as follows: ++=+2 +=+1 −−=−2 −=−1 Insert zeros (0) for all blanks.

* Source: Ben M. Harris, Developmental Teacher Evaluation. Allyn and Bacon, Inc. 1986

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EXHIBIT 8.10 Diagnostic congruence analysis: an illustration with 3 behaviors, 3 sources, and 12 criteria *

	Selected/ Explicated Performance Criteria		Observe Evidence from Three Sources: Self-Report (Teacher)	Observer Report (Principal)	Observer Report (Supervisor)	Diagnoses: A = Accomplishment, N = Need, U = Uncertainty, R = Refine or Upgrade
X	Behavior 1d—Paces activities to assure task accomplishment.					
	(1) Moves about the room surveying individual student activities.	(1)	Yes	Yes	Yes	A
	(2) Reminds student group of time allocations.	(2)	Yes	?	No	U
	(3) Adjusts time allocations to fit needs of individuals.	(3)	No	No	No	N #1 Priority
	(4) Provides direct assistance to individuals and small groups in completing assigned tasks.	(4)	Yes	?	?	R
Y	Behavior 3b—Encourages and guides student responses and interactions.					
	(5) Gives information and makes suggestions to stimulate and guide student activity.	(5)	Yes	Yes	?	R
	(6) Asks students for information and for suggestions beyond recitation and routine.	(6)	Yes	No	No	U
	(7) Waits extended periods of time. (3-5 seconds) following questions, to allow for a student response.	(7)	?	No	No	N #4 Priority
	(8) Listens thoughtfully to student questions and ideas, nodding, keeping eye contact, and avoiding interruptions.	(8)	Yes	No	No	N
Z	Behavior 6b—Involves students actively in multi-sensory experiences.					
	(9) Directs students in role playing in connection with assignments.	(9)	No	No	No	N #2 Priority
	(10) Arranges laboratory-type experiments for students.	(10)	?	?	?	R or U?
	(11) Assigns and outlines action-research projects for students as regular assignments.	(11)	No	No	No	N #3 Priority
	(12) Utilizes games that simulate real situations.	(12)	?	No	?	U

* Source: Ben M. Harris, Developmental Teacher Evaluation. Allyn and Bacon, Inc. 1986.

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DoTEK INSTRUMENT II

6b

TEACHER BEHAVIOR SELF REPORT

Teacher Helen Wills Grade 9th Subject Science

School High Line City High Date 9/18/8-

PERFORMANCE # 6 MULTI-MEDIA INTEGRATIVE

BEHAVIOR # 6b - Involves students actively and regularly in such multi-sensory experiences as dramatizations, verbal interactions, games, drawings, and field studies.

Directions: Show the extent to which each indicator is descriptive of your teaching by circling the appropriate designation in the space to the right.	Highly	Moderately	Not Very
6b(1) Directs students in using role-plays or socio-dramas in connection with their assignments.	(HD)	MD	ND
6b(2) Structures discussion groups to provide extended opportunities for students to verbalize and share knowledge with each other.	HD	(MD)	ND
6b(3) Encourages students to illustrate learning in graphic or artistic forms.	(HD)	MD	ND
6b(4) Utilizes games in ways which stimulate interest and participation without excessive competition.	HD	(MD)	ND
6b(5) Provides for out-of-classroom learning in school and community settings.	(HD)	MD	ND
6b(6) Arranges for laboratory experiments, special projects, or action research studies as a part of regular assignments.	HD	(MD)	ND
	HD	MD	ND
	HD	MD	ND

Conference Notes:

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DoTEK INSTRUMENT IV

6b

SUPPLEMENTAL STUDENT REPORT

Teacher's Name Helen Wills Grade 9th

Subject Science Boy ✓ Girl _____ Date 9/18/8-

Put a check mark in the box after every statement below that *tells something your teacher does.* Example: [-]

(1)	Shows us how to act out ideas or things we are learning.	[✓] IIII III
(2)	Sets up groups where we really talk to each other as a part of the lesson.	[ ] II
(3)	Likes for us to show what we have learned by drawing or using some other kind of art.	[ ] IIII
(4)	Uses games which are interesting and help us learn.	[✓] IIII
(5)	Takes us to places outside the classroom as a part of our lessons.	[ ] II
(6)	Has us do experiments and special projects as a part of our regular work.	[✓] IIII IIII

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DoTEK INSTRUMENT III

CLASSROOM OBSERVER REPORT

Teacher: Helen Wills Grade: 9th Subject: Science

School: Highline City High Observer: Prin. ( ) Supv. (X) Other ( ) Date: 9/22/8-

Time: 8:40 to 9:25 Lesson Topic: Leaking Bottle lesson - Where condensation comes from and why?

PERFORMANCE # MULTI-MEDIA INTEGRATIVE BEHAVIOR # 6b - Involves students actively and regularly in such multi-sensory experiences as dramatizations, verbal interactions, games, drawings, and field studies.

INDICATORS AND DESCRIPTIONS OF OBSERVED EVENTS

6b(1) Directs students in using role-plays or socio-drama in connection with their assignments.

- T. asks students to be like scientists "... being very critical, ... avoid making assumptions ..."
- T. encourages continuing speculation about the condensation, pressures in the bottle, leaking, ice formation. But no real structured, "scientific" approach is provided.
- T. role of scientists not really structured... Students allowed to freely speculate instead.

6b(2) Structures discussion groups to provide extended opportunities for students to verbalize and share knowledge with each other.

- Opens discussion following presentation with "cone" bottle. "What do you think of my explanation?" ...
- T. repeats students' words. "It's 'flowing out'... 'sweating'...." Says it again Pam." Next student answers: "It's condensing." T. says "It's condensing" Alright. Do you all agree?" Students just nod. T. says, "Is that what pam means?" Keith tries to explain "sweating" as moisture in the air. Kenneth and Mike add similar ideas.
- T. cuts off student reactions as interest mounts. Only 5 students make comments.
- T. rarely probes or challenges. Speculations accepted just as are faulty misconceptions never challenged.

6b(3) Encourages students to illustrate learning in graphic or artistic forms.

T. illustrates ideas of students on the board as they talk. T. uses a cause and effect sequence (diagrams it on the board).

T. does not encourage use of board or other illustrate modes. When Tim and others are struggling for words: T. "... the pressure forced the cap up ... Is that what you mean?" Tim: "well... sort of... around the sides..." Students begin to argue over ice, pressure, leaks, etc. but no use of illustrations suggested.

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6b(4) Utilizes games in ways which stimulate interest and participation without excessive competition.

- T. introduces lesson by talking a bottle of coke from a thermos.
- T. interrupts logical explanations being given to say: "How do you know that bottle is cold? How do you know the beads of liquid are water? How do you know the bottle is even glass?" Students respond eagerly with logical tests. "... taste it!", "see it", "tap it with a pencil."

T. starts to talk about "assumptions"

- T. asks for student to explain. "Roseanne had an idea that... Well, let's have her explain." Later. Kenneth - "Well I agree with Michael cause..." Keith: "well I want him to explain it to me ... why?" Teacher acts as facilitator. "Go ahead."
- T. encourages other "Go ahead, I don't have to call on you." Four others make comments.

6b(5) Provides for out-of-classroom learning in school and community settings.

(No evidence)

6b(6) Arranges for laboratory experiments, special projects, or action research studies as a part of regular assignments.

- T. asks "... what's happening to our cone?" after wiping it dry and placing it on a shelf for all to see.
- T. has coke in thermos on entering the room, using ice(?) to assure that it will be very cold ... moisture forms quickly on the bottle.
- T. does not submit student ideas to tests. Students not involved in testing, measuring, testing. Emphasis is on talking about visual observations and related known facts (some not correct).

SUMMARIZE YOUR OBSERVATIONS. Circle the appropriate designation for each indicator.

Indicator is:	Indicator Number: 6b(1)	6b(2)	6b(3)	6b(4)	6b(5)	6b(6)		
Highly Descriptive	HD	HD	HD	HD	HD	HD	HD	HD
Moderately Descriptive	MD	(MD)	MD	MD	MD	(MD)	MD	MD
Not very Descriptive	(ND)	ND	(ND)	(ND)	(ND)	ND	ND	ND

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DeTEK INSTRUMENT V

DATA ANALYSIS WORKSHEET

Teacher Helen Wills Grade 9th Subject Science Date 9/23/8-

School Highline City High School Collaborator(s): Prin. ( ) Supv. (X) Other ( )

PERFORMANCE # 6 BEHAVIOR # 6b - Involves stds. actively and regularly in ... multi-sensory experiences ... drama., verbal., games, etc.

(1) Indicators (Write abbreviated description of indicators)	(2) Self-Report II	(3) Observation Report III	(4) Agree or Disagree	(5) Supplemental Student Report IV	(6) Accomplish-ments (Circle)	(7) NEEDS Yes-Uncertain
6b(1) Directs SS in role P.	H	N	Disagree	8	*	Uncertain
6b(2) Struct. discussion	M	M	Agree	2	*	Upgrade
6b(3) Encourages Ss to illustrate	H	N	Disagree	4	*	Uncertain
	-	-	-		*	
6b(4) Utilizes games	M	N	Disagree	5	*	Upgrade
6b(5) Out of classrm.	H	N	Disagree	2	*	Uncertain
6b(6) Lab exper. and projects.	M	M	Agree	1	*	Refine

Number of Student Reports = 15

(8) If "uncertain" is designated in col. 7, set date for an observation here.

Day Thurs

Date 9/25/8-

Time 9:35

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